

09750510

## ABSTRACT OF THE DISCLOSURE

Disclosed is a method for fabricating high-purity silica glass using a sol-gel processing that includes the steps of: (a) mixing a deionized water with a fluorine compound and a dispersion agent to prepare an aqueous premix solution; (b) mixing  
5 the aqueous premix solution with a fumed silica; (c) mixing the resulting mixture to form a dispersed sol; (d) aging the sol at the ambient temperature to stabilize silica particles; and, (e) removing air voids from the sol and adding a gelation agent.

10  
15  
20  
25  
30  
35  
40  
45  
50  
55  
60  
65  
70  
75  
80  
85  
90  
95  
100  
105  
110  
115  
120  
125  
130  
135  
140  
145  
150  
155  
160  
165  
170  
175  
180  
185  
190  
195  
200  
205  
210  
215  
220  
225  
230  
235  
240  
245  
250  
255  
260  
265  
270  
275  
280  
285  
290  
295  
300  
305  
310  
315  
320  
325  
330  
335  
340  
345  
350  
355  
360  
365  
370  
375  
380  
385  
390  
395  
400  
405  
410  
415  
420  
425  
430  
435  
440  
445  
450  
455  
460  
465  
470  
475  
480  
485  
490  
495  
500